



January 26, 2008

Ms. Pat Vogtman
Project Officer (SM-5J)
U.S. Environmental Protection Agency Region 5
77 W. Jackson Blvd.
Chicago, IL 60604

**Subject: Matthiessen and Hegeler Zinc Company Site, OU2,
LaSalle, Illinois
Revised Work Plan for Remedial Investigation/Feasibility Study(RI/FS)
Response Action Contract (RAC) 2 EP-S5-06-02
Work Assignment No. 016-RICO-0568**

Dear Ms. Vogtman:

SulTRAC is enclosing a copy of the above referenced work plan for your review. SulTRAC has estimated a total cost of \$610,126 to complete the activities described in the work plan over a period of performance extending through May 31, 2008. The cost estimate information provided is business confidential.

SulTRAC has written this revision in accordance with work assignment form revision number two signed on January 15, 2008. This work plan includes a new task and details augmented level of effort (LOE) hours. Specifically, this revised work plan includes Task 4 and presents augmented LOE hours for Task 3, Task 4, Task 5, and Task 6. In total, SulTRAC anticipates 628 additional LOE are necessary to complete the Phase I RI/FS activities as outlined in the statement of work. Due to savings in subcontracted work, the total cost of the Phase 1 work has been reduced.

Task 4 was added in to the work plan in order to accommodate a special analytical services laboratory to analyze collected samples for asbestos. In December 2007 SulTRAC was notified that asbestos samples could not be analyzed through any of the U.S. Environmental Protection Agency's governmental laboratory programs. LOE has been added to Task 5 and 6 to accommodate data validation and evaluation of these results.

Task 5 and Task 6 hours were augmented for several other reasons which include: (1) a delay in the start of Phase I field work, resulted in SulTRAC performing Task 5 and Task 6 activities later than originally estimated, (2) the need to create a M&H sitewide database which originally was the expected to be the responsibility of the potentially responsible party's consultant, (3) the enormous amount of analytical data generated from Summer of 2007 field sampling was much larger than originally perceived, and (4) the need to validate asbestos data. Additionally, the Data Validation and Data Evaluation Reports were also intended to be written encompassing the entire data set, however, due to the delayed receipt of validated data from the Region 5 Environmental Services Assistance Team (ESAT) contractor, SulTRAC has three of each report type to deliver. The data set was broken into three subsets in an attempt to analyze and synthesize Phase I data more efficiently so that Phase II work plans and pre-field activities could begin sooner, enabling a Phase II field sampling commencement for Summer of 2008.

The cost estimations are included as an attachment containing three separate sets of tables which include: (1) costs through December 2007 (including Award Fee), (2) a breakdown of the additional LOE hours and costs to May 2008, and (3) the revised total work assignment cost estimate.

If you have any questions regarding this work plan, please call me at (312) 201-7722.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Riesing".

Ronald Riesing, P.E.
SulTRAC Program Manager

Enclosure

cc: Parveen Vij, US EPA Contracting Officer
Demaree Collier, US EPA Work Assignment Manager
Jennifer Lawson Knoepfle, SulTRAC Project Manager
File

**WORK PLAN-PHASE I
REVISION 1**

**FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY
MATTHIESSEN AND HEGELER ZINC COMPANY
OPERABLE UNIT 2
LA SALLE COUNTY, ILLINOIS**

**Prepared for
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604**

Work Assignment No. : 016-RICO-B568
US EPA Region : 5
Date Prepared : January 25, 2008
Contract No. : EP-S5-06-02
Prepared by : SulTRAC
SulTRAC Project Manager : Jennifer Lawson Knoepfle
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1.0 INTRODUCTION

SulTRAC has prepared this revised work plan for the United States Environmental Protection Agency (US EPA) Region 5 under Work Assignment (WA) No. 016-RICO-B568, Response Action Contract 2 (RAC 2) No. EP-S5-06-02. The initial WA form (WAF) was signed by the US EPA contracting office on December 8, 2006 and revision number one was signed on January 8, 2007. To include additional activities WAF revision number 2 was signed on January 15, 2008. SulTRAC participated in a kickoff meeting with US EPA on December 28, 2006. During this meeting, it was decided that this WA would be addressed in a “phased approach” work plan. Specifically, this Phase I work plan includes Task 1 through Task 6 and Task 15, incorporating only the first round of field sampling in Task 3 as described in the revised scope of work (SOW). Phase I began Summer of 2007 while Phase II was to commence Fall of 2007. Only the Phase I field investigation and related activities and deliverables were described in the January 2007 work plan.

This work plan includes a new task and details augmented level of effort (LOE) hours, yet no change in total project costs. Specifically, this revised work plan includes Task 4 for activities associated with analyzing soil samples for asbestos collected during Phase I. This work plan also presents augmented LOE hours for Task 4, Task 5, and Task 6. All LOE tables for each task and subtask have been updated through December 2007. The cost estimations are included as an attachment containing three separate sets of tables which include: (1) costs through December 2007 (including Award Fee), (2) a breakdown of the additional LOE hours and costs to May 2008, and (3) the revised total work assignment cost estimate.

Matthiessen and Hegeler Zinc Company Site (M&H Site) is being addressed under two separate RI/FS activities. SulTRAC will be providing technical support for both the potentially responsible party (PRP)-lead RI/FS (WA 015-RSBD-B568), as well as this fund-lead RI/FS (WA 016-RICO-B568). SulTRAC and US EPA will be working together with Carus Chemical and its contractor during the entirety of the RI/FS to ensure that the combined RI/FS report for both WAs provides all necessary information, without duplication of efforts.

1.1 Site Description

The entire M&H Site, located in La Salle, LaSalle County, Illinois is approximately 160 acres inclusive of inactive primary zinc smelting operations and associated abandoned buildings, a rolling mill, and the active Carus Chemical Company and its property. The M&H Site is bounded by the Little Vermilion River to the north and east and by private residences to the south and west. Tracts of farmland and a limestone quarry are located across the Little Vermilion River to the north and east of the site, respectively. The City of LaSalle obtains their drinking water from a cluster of four wells located 0.75 miles south of the M&H Site, with the nearest municipal well also situated approximately 0.75 miles south of the M&H Site. An abandoned sewer line runs across the property, which serves as a transport mechanism for surface water runoff directly into the Little Vermilion River. A wetland is located approximately 0.5 miles upstream from the M&H Site and the Illinois River is located approximately 1 mile downstream of the M&H Site. The Lake DePue Fish and Wildlife Area and the Spring Lake Heron Colony are situated about 15 miles downstream of the M&H Site.

The M&H Site began operations in 1858 when raw materials such as zinc ore and various grades of coal were transported to smelt zinc. A rolling mill was built on-site in 1866 to produce zinc sheets. This process included a furnace that used producer gas as fuel and any sulfur dioxide generated was recovered and converted into sulfuric acid where it was stored in on-site tanks. The M&H Site also had an ammonium sulfate fertilizer plant which was operational for a few years during the early 1950s. Coal mining occurred at the M&H Site until 1937, where two mining shafts (one vertical, one horizontal)

remain today. Zinc smelting ceased in 1961, while sulfuric acid manufacturing halted in 1968. From this time until 1978 when bankruptcy was declared, the facility only performed rolling mill operations. This 12 acre tract was purchased by Fred and Cynthia Carus in 1980 and became the LaSalle Rolling Mills. The LaSalle Rolling Mills worked under contract with the United States Mint to generate metal blanks for pennies and operated until 2000 when bankruptcy was declared. In 2003, US EPA conducted an emergency removal at the LaSalle Rolling Mills to address cyanide contamination, the old plating line, and various other chemicals and storage tanks that remained after the rolling mill closure. This removal is complete. South of the rolling mills exists the Carus Chemical Company and Carus Chemical property. The chemical company has been operational since 1915 and mainly produces potassium permanganate.

The M&H Site has been divided into two operable units (OU), OU1 and OU2. As negotiated by a settlement order signed in September 2006, OU1 includes the Carus Chemical Company and property, the Little Vermillion River adjacent to the entire M&H Site, and a large slag and sinter waste pile, approximately 6 acres in area and 40 to 100 feet in depth. OU2, approximately 140 acres, is identified as the production area of the former zinc smelting and rolling processes and the immediate property surrounding this area. Specifically, OU2 includes the former rolling mill facility, approximately 150 associated former buildings and structures, a shallow slag and sinter pile which heterogeneously covers the former production area of the M&H Site, several abandoned and closed mine shafts, an undeveloped woodland, and surrounding residential areas. The bulk of the residential area is being investigated by the US EPA Field Environmental Decision Support (FIELDS) Team

The M&H Site was listed on the National Priorities List (NPL) on September 29, 2003. Two primary sources located on the property were used to score the site for the NPL. The first source is the six acre waste pile located on the Carus Chemical Company property of the M & H Site (OU1). This contamination source is addressed under a separate WA (015-RSBD-B568) and SOW which will not be further discussed in this work plan.

The second source is a shallow waste pile, composed of sinter and slag heterogeneously deposited throughout the former smelter property, included within OU2. The contaminants discovered in the second source appear to be the result of former zinc smelter activities and ancillary operations as described above. Runoff from this shallow sinter and slag cover flows into the Little Vermilion River through natural drainage pathways and manmade conduits. In the central portion of OU2, west of the abandoned railroad, there is a conduit running from an abandoned pump house to the Little Vermilion River as well as drainage which enters an old abandoned and collapsed storm sewer line which runs east-west across the entire width of OU2.

During the November 1991 CERCLA screening site inspection, and the December 1993 CERCLA Integrated Assessment sampling, the Illinois EPA (IEPA) collected several samples from the two sources. Five samples were taken from the sinter slag cover on OU2. The IEPA also observed a release to surface water during the 1993 screening which was subsequently substantiated by chemical analyses of sediment samples in the Little Vermilion River.

There is also reason to believe that asbestos and polychlorinated biphenyl (PCB) contamination may be found in surface soils of OU2. Asbestos contamination may be widespread as it was used as a building material, thermal insulation, and fire proofing in many of the 150 M&H buildings. Upon demolition of most of the M&H buildings (e.g. implosion) asbestos is believed to have been distributed aerially across the site. OU2 also housed several small electrical transformers. PCBs were used in electrical transformers manufactured between 1929 and 1977. The removal and disposal of these transformers is not documented, thus, PCB soil contamination may be found in the vicinity of former transformer sites.

The chemicals of interest that have been identified as potentially hazardous to human health and the environment at the M&H Site within OU2 are based on above documented investigations and on information obtained by SulTRAC are shown below (see Table 1).

TABLE 1: CHEMICALS OF INTEREST AT OU2

Chemical of Interest	Maximum Concentration¹ (mg/kg)
Cadmium	1,320
Copper	3,650
Lead	4,310
Zinc	71,200
Pentachlorophenol	36
Asbestos	unknown
Polychlorinated biphenyls	unknown
¹ Maximum concentrations are from waste pile samples	

1.2 Purpose

The purpose of the WA is to conduct Phase I of the RI/FS at OU2 on the M&H Site. Phase I encompasses field and other activities to characterize and identify contamination on OU2. Phase II will delineate contamination as well as select a remedy, and eliminate, reduce, or control risks to human health and the environment. Specifically, the RI/FS involves the investigation and study of former rolling mills and associated buildings, the shallow sinter and slag cover that exists over much of the M&H Site, and surrounding residential areas. The goal of the RI/FS activities is to develop the minimum amount of data necessary to support the selection of an approach for site remediation and then to use this data to result in a well supported record of decision (ROD).

1.3 General Requirements

SulTRAC will document how the RI/FS will be implemented in order to provide the information necessary to develop a well supported ROD that when implemented through a remedial action, will eliminate, reduce or control risks to human health and the environment. SulTRAC will furnish all necessary and appropriate personnel, materials, and services needed for, or incidental to, performing and completing the RI/FS in accordance with the SOW.

In conducting the WA, SulTRAC will propose the most appropriate and cost effective procedures and methodologies using accepted engineering practices and controls. SulTRAC will be responsible for performing services and providing products at the lowest reasonable cost. If there are changes to the SOW by the government, the government will issue a formal amendment to the SOW and will negotiate the cost of the amendment with SulTRAC to form a new cost estimate.

SulTRAC will maintain all technical and financial records for the RI/FS in accordance with the contract. SulTRAC will make an effort to submit documents and deliverables using electronic media whenever possible. At the completion of the WA, SulTRAC will submit an official record of the RI/FS oversight in both compact disc and hardcopy to the work assignment manager (WAM).

SulTRAC will communicate as appropriate with the US EPA WAM, either in face to face meetings or via teleconferences. The US EPA and SulTRAC contacts for this WA are listed below.

US EPA Primary Contact: Ms. Demaree Collier, US EPA Region 5 Remedial Project Manager and WAM, (312) 886-0216 or collier.demaree@epa.gov; facsimile: (312) 866-4071; mailing address: US EPA Region 5, 77 West Jackson Boulevard, (SR-6J) Chicago, IL 60604

US EPA Secondary Contact: Ms. Patricia Vogtman, US EPA Region 5 Project Officer (PO), (312) 886-9553 or vogtman.pat@epa.gov; facsimile: (312) 886-0186; mailing address: US EPA Region 5, Mail code SM-5J, 77 West Jackson Boulevard, Chicago, IL 60604

SulTRAC Project Manager: Dr. Jennifer Lawson Knoepfle, (312) 443-0550 or jknoepfle@onesullivan.com, facsimile (312) 443-0557 extension 16; mailing address: Sullivan International Group, Inc., 125 South Wacker Drive, Suite 1180, Chicago, IL 60606

SulTRAC Program Manager: Mr. Ron Riesing, (312) 201-7722 or ronald.riesing@ttemi.com; facsimile (312) 938-0118; mailing address: Tetra Tech EM, Inc., 1 South Wacker Drive, 37th Floor, Chicago, IL 60606

2.0 PROJECT APPROACH

The US EPA SOW identifies the following 15 tasks under the RI/FS oversight WA:

- Task 1—Project Planning and Support
- Task 2—Community Involvement
- Task 3—Field Investigation/Data Acquisition
- Task 4—Sample Analysis
- Task 5—Analytical Support and Data Validation
- Task 6—Data Evaluation
- Task 7—Risk Assessment
- Task 8—Treatability Study/Pilot Testing (N/A)
- Task 9—Remedial Investigation Report
- Task 10—Remedial Alternatives Screening
- Task 11—Remedial Alternatives Evaluation
- Task 12—Feasibility Study Report
- Task 13—Post RI/FS Support
- Task 14—Administrative Record (N/A)
- Task 15—Work Assignment Closeout

Tasks and sub-tasks identified as not applicable (N/A) to this WA are not discussed further in this work plan.

As this is the Phase I work plan, only Tasks 1 through Task 6 and Task 15, comprising only the first round of field sampling in Task 3, will be addressed in the following sections. These sections describe SulTRAC's technical approach for completing the activities required under each applicable task, present SulTRAC's estimates of LOE hours required to perform each task, and discuss the assumptions used in estimating LOE hours and costs. The remaining tasks will be addressed under a new WA.

TASK 1—PROJECT PLANNING AND SUPPORT

This work element involves planning the execution and overall management of this WA. The US EPA SOW identifies four subtasks to be completed as part of the overall planning and support task as follows:

- Subtask 1.1—Work Plan
- Subtask 1.2—Site-Specific Plans

Subtask 1.3—Project Management and Reporting

Subtask 1.4—Subcontractor Procurement and Support Activities

The following sections of this work plan discuss SulTRAC's understanding of and technical approach to completing each subtask, present SulTRAC's estimated costs to perform the activities included in each subtask, and present the assumptions used to derive those estimated costs. Table A-1 in the Appendix presents the total estimated costs for labor, travel, equipment, and other direct costs (ODCs) associated with completing Task 1.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
285	207	422	349	1263	17	\$1,655	\$1,148	\$0	\$102,937

The following sections discuss further details of the Task 1 subtask components.

Subtask 1.1 — Work Plan

SulTRAC prepared and submitted a Phase I RI/FS work plan for OU2 that includes a detailed description of implementation activities, performance monitoring, and overall management strategy, including optimization, for the RI/FS. The WA is being addressed in a "phased approach," with the Phase I work plan including Task 1 through Task 6 and Task 15, and only including the first field investigation in Task 3. Task 1 includes the following efforts related to project initiation.

P4	P3	P2	P1	Total LOE	CL
48	85	146	47	326	17

- Attend Kickoff Meeting—SulTRAC contacted the US EPA WAM and PO within 5 calendar days after receiving the WA to schedule the kickoff meeting, which was held on December 28, 2006. SulTRAC personnel, Jennifer Lawson Knoepfle, William Earle, and Ron Riesing attended the kickoff meeting with US EPA, which was conducted over a two hour period. Dr. Knoepfle and Mr. Earle also had 2 hours of preparation time for the meeting. LOE will be split between the WA for OU1 and OU2.

P4	P3	P2	P1	Total LOE	CL
1	2	2	0	5	0

- Review Background Documents—SulTRAC reviewed background documents which included the 1991 CERCLA Screening Site Inspection, Illinois 1993 Assessment, Administrative Order on Consent for RI/FS at Matthiessen and Hegeler Zinc Co. Site (OU2), and Carus Chemical Company documents pertaining to sampling. Additionally, Matthiessen and Hegeler Zinc Company records archived at Northern Illinois University (NIU), as relevant to the RI/FS for purposes of the work plan preparation were selected and copied. Travel costs and LOE hours to visit NIU and obtain archived records are included in this work plan.

P4	P3	P2	P1	Total LOE	CL
0	40	40	31	111	0

- Conduct Site Visit—SulTRAC personnel, Jennifer Lawson Knoepfle and William Earle visited the M & H Site with the WAM and Carus Chemical's contractor on December 14, 2006, to assist

in developing and understanding of the H & M Site and logistics required to complete the WA. A second site visit was conducted January 12, 2007 by the same SulTRAC personnel to make observations, to ground truth maps from the document review, and to delineate buildings, debris piles, abandoned mine shafts, etc.

P4	P3	P2	P1	Total LOE	CL
0	24	24	0	48	0

- Attend Kickoff Meeting—SulTRAC personnel also participated in a kickoff meeting on December 14, 2006 with Carus Chemical, their contractor, and the US EPA COR, to discuss OUI activities. These hours are included in the site visit allocation above.
- Prepare Work Plan and Revised Work Plan — SulTRAC prepared and submitted the work plan on January 29, 2007. SulTRAC used information from the appropriate US EPA guidance and technical direction provided by the US EPA WAM as the basis for preparing the work plan. SulTRAC's RI/FS oversight work will be coordinated and properly sequenced with US EPA and any document submittals of the PRP, if applicable. SulTRAC is submitting this work plan electronically to the US EPA Region 5 WAM, PO and contracting officer (CO), as requested at the kickoff meeting. This revised work plan is being prepared as discussed in WAF revision number 2 from January 15, 2008.

This work plan includes a comprehensive description of project tasks, the procedures to accomplish them, project documentation, and a project schedule. SulTRAC will use existing quality assurance and quality control (QA/QC) systems and procedures to assure that the work plan and other deliverables are of professional quality, requiring only minor revisions. Specifically, the work plan includes the following:

- Identification of RI/FS project elements and the associated tasking.
- SulTRAC's technical approach to each task to be performed, including a detailed description of each task, assumptions used, information to be produced during and at the conclusion of each task, and a description of work products to be submitted to the US EPA. Information will be presented in a sequence consistent with the SOW.
- A schedule (see Section 3.0) with specific dates for completing each required activity and submitting each deliverable required in the SOW.

P4	P3	P2	P1	Total LOE	CL
38	11	64	16	129	17

- Revise Work Plan—SulTRAC will attend a work plan fact finding/ negotiation meeting for this revision if needed. SulTRAC will prepare and submit a revised work plan incorporating the agreements made in the finding/ negotiation meeting.

P4	P3	P2	P1	Total LOE	CL
8	8	16	0	32	0

- Prepare Conflict-of-Interest Disclosure—As required in the US EPA SOW, SulTRAC prepared and submitted its conflict-of-interest (COI) disclosure to US EPA, within 5 days from acceptance of the WA. on December 14, 2006.

P4	P3	P2	P1	Total LOE	CL
1	0	0	0	1	0

Subtask 1.2 — Site-Specific Plans

This task includes preparing, updating, and/or maintaining site-specific plans in accordance with the applicable guidance as necessary for the RI/FS.

P4	P3	P2	P1	Total LOE	CL
69	29	62	259	419	0

- Site Management Plan (SMP)—SulTRAC provided US EPA with a written understanding of how access, security, contingency procedures, management responsibilities, and waste disposal will be handled. The SMP outlined the processes, procedures, and safeguards that will be used to ensure that contaminants or pollutants are not released off-site during the implementation of the remedial investigation, and how wastes encountered will be managed and disposed. The SMP will be sufficient to encompass both Phase I and Phase II of the field sampling investigation.

P4	P3	P2	P1	Total LOE	CL
3	9	4	32	48	0

- Sampling and Analysis Plan (SAP)—SulTRAC prepared a site-specific SAP for the investigation, consisting of:
 - Field Sampling Plan (FSP)—The FSP will describe the number, types, and locations of samples to be collected and the analyses to be performed. SulTRAC will be conducting a Phase I FSP followed by an amended Phase II FSP. The Phase II FSP will be submitted as part of the new WA. The cost table below includes LOE hours for the preparation of the Phase I FSP.

P4	P3	P2	P1	Total LOE	CL
32	4	34	46	116	0

- Quality Assurance Project Plan (QAPP)—The QAPP was prepared in accordance with the Uniform Federal Policy (UFP) for Implementing Environmental Quality Systems, dated March 2005. The QAPP describes policy, organization, and functional activities, and data quality objectives and measures necessary to provide adequate data for planning and documenting the sampling investigation. SulTRAC completed a Phase I QAPP which will be followed by an amended Phase II QAPP. The Phase II QAPP will be submitted as part of the new WA. SulTRAC will make minor revisions to the current Phase I QAPP in order to incorporate and document the QA/QC for the subcontracted asbestos analyses. The cost table below includes LOE hours for preparation of the Phase I QAPP and the revised Phase I QAPP.

P4	P3	P2	P1	Total LOE	CL
28	14	12	141	195	0

- Data Management Plan (DMP)—SulTRAC prepared a DMP that outlined the procedures for storing, handling, accessing, and securing the data collected for this WA. SulTRAC will need to prepare a revised DMP that changes the M&H database management development and ownership from Geosyntec, the PRPs consultant, to SulTRAC. The DMP will be sufficient to encompass both Phase I and Phase II of the field sampling investigation.

P4	P3	P2	P1	Total LOE	CL
3	0	4	32	39	0

- Health and Safety Plan (HASP)—SulTRAC prepared a site specific HASP that specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 29 CFR 1910.120 1(1) and (1)(2). The HASP is sufficient to encompass both Phase I and Phase II of the field sampling investigation.

P4	P3	P2	P1	Total LOE	CL
3	2	8	8	21	0

Subtask 1.3 – Project Management and Reporting

SulTRAC will perform general WA management activities including communications with WAM, managing and tracking costs, preparing monthly progress reports, attending project meetings, attending US EPA held training and audits, preparing and submitting invoices, and accommodating any external audits or review mechanisms as required. The anticipated period of performance for this project is December 2006 through May 2008.

P4	P3	P2	P1	Total LOE	CL
157	48	111	0	316	27

SulTRAC will perform the following activities required to effectively manage the WA:

- Prepare monthly reports, track costs and submit invoices—As part of this subtask, SulTRAC will provide general coordination and communication for the project. SulTRAC will prepare monthly progress reports in accordance with contract requirements. The reports will be submitted to the US EPA Region 5 by the 20th calendar day of each month. SulTRAC will document the technical progress and status of each task in the work breakdown structure (WBS) by operable unit for the reporting period in accordance with contract requirements. SulTRAC will report costs and LOE hours (by P level) for the reporting period, as well as cumulative amounts expended to date. SulTRAC will notify US EPA when 75 percent of the approved WA budget has been expended. SulTRAC will track costs and monthly invoices will be prepared and submitted in accordance with the level of detail specified in the contract. SulTRAC will track and report LOE hours and costs by operable unit. SulTRAC has estimated 10 LOE hours and 1.5 clerical hours per month for the performance period of 18 months for this subtask.

P4	P3	P2	P1	Total LOE	CL
100	20	60	0	180	27

Participate in progress meetings—SulTRAC has participated in progress meetings during the course of the WA. As identified in the WA, SulTRAC assumed 6 meetings, with three people in attendance, for 8 hours. Four hour round trip travel time was included in our estimate. To date, there have been two on-site meetings and three conference calls attended between the US EPA, Geosyntec (PRP), and SulTRAC. A 2-day meeting is currently planned for early March 2008 with five people in attendance. Also monthly teleconference meetings are scheduled to begin February 2008 between US EPA, SulTRAC, and Geosyntec.

P4	P3	P2	P1	Total LOE	CL
57	28	51	0	136	0

In accordance with the RAC 2 contract, cost has been included for the non site-specific program management budget.

Subtask 1.4 – Subcontractor Procurement and Support Activities

SulTRAC identified, procured, and administered the necessary subcontracts which include, but are not limited to, drilling and geoprobe companies, surveyors, equipment rentals, electricians, security personnel, water delivery, human portable sanitation services, etc. Details regarding the costing of the subcontractor and support activity procurement are in specified in Task 3 and Appendix A (see Table A-6).

SulTRAC has reviewed, approved, and monitored the subcontractor’s quality assurance/quality control (QA/QC) program and conducted audits, as required and performed any necessary management oversight of subcontractors needed to implement this work plan. SulTRAC has reviewed and approved subcontractors’ invoices and issued any necessary contract modifications.

In addition to the above subcontractor activities, SulTRAC is in the process of procuring an analytical laboratory to perform asbestos analyses on collected Phase I field samples. Additional LOE have been included for this subtask.

P4	P3	P2	P1	Total LOE	CL
11	45	103	43	202	0

TASK 2 —COMMUNITY INVOLVEMENT

SulTRAC will provide community involvement technical support to US EPA at four public meetings throughout the RI/FS. SulTRAC assumes that 2 SulTRAC personnel will attend the public/availability sessions. Four hour travel time and overnight motel stay are included in this task for SulTRAC personnel.

This task includes technical support provided by SulTRAC during public/availability meetings under the associated community involvement work assignment. SulTRAC will provide community involvement support to the US EPA in accordance with the *National Oil and Hazardous Substances Pollution Contingency Plan* (NCP, 40 CFR Part 300) and the *Community Relations in Superfund – A Handbook*, (US EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9230.0-3C, January 1992).

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
0	10	10	0	20	0	\$0	\$0	\$0	\$1,405

TASK 3 —FIELD INVESTIGATION/DATA ACQUISITION

Data acquisition entails collecting environmental samples and information required to support the RI/FS for OU2. As described previously, the field work for this effort will be divided into two phases. Phase I started Summer 2007 while Phase II will commence Summer 2008. Only Phase I field activities will be detailed in the document below. Phase II activities will be included in a new WA.

The planning for this task is accomplished in Task 1 (Project Planning and Support), which results in the plans required to collect field data. Data acquisition starts with US EPA's approval of the FSP, QAPP, and HASP, developed in Task 1 and ends with the demobilization of field personnel and equipment from the M&H Site following Phase I activities.

SulTRAC performed the following field activities or combination of activities for data acquisition in accordance with the approved Phase I FSP:

- Mobilization
 - Site set up—Activities include, but are not limited to, site-trailer set-up, portable bathroom set-up, electrical service hook-up to site-trailer, construction of staging area, construction of decontamination area, site security, and site clearing with gravel addition to create temporary roads (facilitating vehicle and equipment movements). SulTRAC has included these services in Appendix A (See Table A-5, Table A-6). Continuation of services such as site-trailer rental have estimated costs over an eleven month (July 2007 through May 2008) time period, which would encompass the full Phase I phase of field sampling (see Table A-6). SulTRAC estimated the cost of unarmed security guards to provide site surveillance during evening and weekend hours for the duration of the active Phase I field investigation (19 weeks) only (see Table A-6).

P4	P3	P2	P1	Total LOE	CL
0	8	20	20	48	2

- Field work setup—SulTRAC performed various field screening surveys, which included a soil and surface water pH survey, photo-ionization detector (PID) survey, and a radiation meter survey. SulTRAC also conducted field site familiarization and labeled 150 buildings with corresponding numbers.

P4	P3	P2	P1	Total LOE	CL
0	0	56	56	112	0

- Perform Site Reconnaissance—SulTRAC conducted site surveys including property, boundary, well inventory, utility rights-of-way, and topographic (entire site). A topographic contour map (1 foot contour) was created which showed debris piles, corroded 55-gallon drum piles, abandoned mine shafts, above ground storage tanks, M&H Site buildings, manholes, as well as other locations of interest. Aerial maps from an April 2, 2007 airplane fly-over also provide valuable OU2 site information prior to the field investigation.

P4	P3	P2	P1	Total LOE	CL
8	5	20	0	33	0

- Conduct Geological Investigations—SulTRAC conducted geological investigations and collected surface and subsurface soils. Bedrock is fairly shallow in this region of Illinois, as geologic cross-sections from LaSalle, IL show bedrock as shallow as 2 feet. SulTRAC collected surface (0 – 2 feet) and subsurface (variable depths) samples from 198 geoprobe locations, advanced to 12 feet or refusal, with continuous sampling. An additional two 80 to 90 foot deep borings with continuous sampling, were conducted to ascertain site stratigraphy. Approximately 30 of the 198 soil boring locations were accessible by an all terrain vehicle mounted geoprobe. Three SulTRAC field personnel (12 hour days) will be performing these investigations with the subcontractor(s). This subtask also included field activity oversight, consultation, and/or audit by SulTRAC.

P4	P3	P2	P1	Total LOE	CL
16	60	613	455	1144	0

- Conduct Air Quality Investigations—SulTRAC will conduct air quality investigations during Phase II, if appropriate.
- Conduct Hydrologic and Hydrogeologic Investigations—SulTRAC conducted hydrogeologic investigations involving the installation and development of wells, execution of pump tests, sampling of groundwater, and surface elevation measurements. SulTRAC installed 19 monitoring wells, ranging in depth from 16 to 47 feet, with a 2 inch diameter screen and riser. Eight monitoring wells were installed from 15 to 20 feet, 7 monitoring wells between 20 and 30 feet, and 4 monitoring wells between 30 and 47 feet. All installed wells were PVC-40 material with 10 foot long, 0.10- inch-slotted screens, and a clean sand filter pack extending 2 to 5 feet above the screen with a pellet seal above the sand and bentonite grout to the surface. Wells will be completed with expandable locking caps, 4 foot steel monument well boxes, and three 4 foot bumper posts per location. Phase I field investigation includes two quarters of groundwater sampling, November 2007 and February 2008. Two SulTRAC field personnel (12 hour days) are necessary for five days to complete Contract Laboratory Program (CLP) sample paperwork, groundwater sampling, and surface water elevation measurements.

SulTRAC conducted two hydrologic investigations to sample surface water and runoff on days with and without precipitation events. This hydrologic and hydrogeologic subtask also includes field activity oversight, consultation, and or audit by SulTRAC. Three SulTRAC field personnel were on-site performing the above described hydrologic labor.

P4	P3	P2	P1	Total LOE	CL
0	0	16	140	156	0

- Conduct Waste Investigations—SulTRAC conducted waste investigations by sampling 55 decaying piles of 55-gallon drums and other sinter/slag/unknown debris piles of interest. Three SulTRAC field personnel were required to perform this sampling activity.

P4	P3	P2	P1	Total LOE	CL
0	0	120	72	192	0

- Conduct Geophysical Investigations—SulTRAC did not conducting any geophysical investigations during Phase I. The goal of Phase I is to characterize contamination, identify the source of contamination, and begin delineation of contamination extent. Geophysical investigations are better left for Phase II if the remedial investigation will warrant this type of technology.
- Conduct Ecological Investigation: Two SulTRAC field personnel conducted the following ecological investigations over a two day period during Phase I:
 - Wetland and habitat delineation/function and value assessment
 - Wildlife observations
 - Identification of endangered species and others of special concern

During Phase II of the FSP, benthic reconnaissance/community characterization, bioassays, and biota sampling/population studies will be conducted. The cost box below includes LOE hours for the Phase I activities only.

P4	P3	P2	P1	Total LOE	CL
4	5	32	32	73	0

- Collect Contaminated Building Samples: SulTRAC collected materials from 10 M&H Site buildings to be tested for contamination. This was a biased sampling event based on building history and proximity to known contamination sources. Three SulTRAC field personnel were required to perform this sampling activity.

P4	P3	P2	P1	Total LOE	CL
0	0	43	48	91	0

- Dispose of Investigation-Derived Waste: SulTRAC has accumulated and consolidated all investigation-derived waste in 35 labeled 55-gallon drums located at the M&H Site. All drums have been brought from all investigative areas at the site and collected in one area. All investigative-derived wastes will be disposed of in accordance with local, state, and federal regulations during Phase II.

P4	P3	P2	P1	Total LOE	CL
0	0	8	32	40	0

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
28	78	928	855	1889	2	\$21,684	\$5,149	\$33,452	\$390,913

TASK 4 —SAMPLE ANALYSIS

This task includes only the subcontract cost associated with analysis of samples where it became necessary for SulTRAC to procure analytical services. As it is the regional policy for the US EPA to use

analytical services provided by the government whenever possible before requiring the contractor to procure analytical support. SulTRAC participated in the Contract Laboratory Program for all samples collected as described in Task 3 during the Phase I field activities. However, during the course of 2007 it became apparent that CLP or other government affiliated laboratories could not analyze samples for asbestos. In accordance with WAF revision number 2, SulTRAC will submit 340 collected samples and approximately 15 performance evaluation samples (provided by the US EPA SMO) for asbestos analysis through a special analytical services laboratory. All samples are already prepared and labeled according to CLP protocols; therefore SulTRAC anticipates minimal sample preparation time, with LOE covered under Task 3.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
0	0	0	0	0	0	\$0	\$0	\$0	\$24,705

TASK 5—ANALYTICAL SUPPORT AND DATA VALIDATION

This task provides for analytical support and data validation when required of the samples collected under Task 3. SulTRAC will perform the following activities or combination of activities:

- Collect, prepare, and ship the environmental samples in accordance with FSP and QAPP. LOE hours are included under Task 3.
- Coordinate with the US EPA Sample Management Office (SMO) and the Regional Sample Control Coordinator (RSCC) regarding analytical support, data validation, and quality assurance issues. SulTRAC spent on average 4 hours per week coordinating sample management activities with the SMO and RSCC.

P4	P3	P2	P1	Total LOE	CL
24	92	0	0	116	0

- Implement the US EPA approved laboratory quality assurance program that provides oversight of in-house and subcontracted laboratories through periodic performance evaluation sample analysis and/or on-site audits of operations and has a system of corrective actions.
- Provide sample management including chain-of-custody procedures, information management, sample retention, and 10 year data storage.
- Perform data validation, when necessary. Data validation is the process by which the quality of the data, the defensibility of the data, and the chain of custody are verified. SulTRAC will perform data validation for the 340 asbestos samples upon data receipt from the special analytical services laboratory. SulTRAC anticipates 12 LOE hours for this task.
- Review the data analysis results against the validation criteria or intended purpose. SulTRAC has reviewed CLP CADRE and ESAT validated sample results which encompassed 77 sample delivery groups (SDG) for soil boring, debris pile, surface water, and building samples. SulTRAC will review CLP CADRE and ESAT validated sample results for groundwater samples upon receipt.

- Develop a Data Validation Letter Report for delivery to the WAM after all data has been validated. SulTRAC prepared and submitted a Data Validation Letter Report for 77 SDGs. Two additional Data Validation Letter Reports will be generated for groundwater and asbestos results.

P4	P3	P2	P1	Total LOE	CL
8	48	80	90	226	8

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
32	140	80	90	342	8	\$0	\$78	\$0	\$25,789

TASK 6—DATA EVALUATION

SulTRAC will compile all Phase I sampling data and determine usability of data collected. SulTRAC will prepare and submit three Data Evaluation Summary Reports summarizing Phase I sample results: (1) solid matrices and surface water results, (2) groundwater results, and (3) asbestos results. These reports will include a discussion of analytical results with representative tables and figures and a discussion of any discrepancies, data gaps, etc. SulTRAC will construct a database to handle all M&H Site data collection and perform necessary modeling to evaluate the data.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
54	60	120	100	334	16	\$0	\$1754	\$0	\$24,880

TASK 15—WORK ASSIGNMENT CLOSEOUT

SulTRAC will perform the necessary activities to closeout the WA in accordance with the contract requirements. Typical activities include, but are not limited to:

- Package and return documents to government
- Duplicating/distribution/storage of files
- Preparation of the WA closeout report (WACR).

SulTRAC will prepare the WACR in accordance with regional guidance or other procedures as specified in the WA. In circumstances where the final hours/budget are greater than the +/- 20% of the approved work plan hours/budget, SulTRAC will provide an explanation for the underage/overage.

P4	P3	P2	P1	Total LOE	CL	Travel	ODCs	Equipment	Total Cost
8	0	10	0	18	12	\$0	\$44	\$0	\$1,976

3.0 SCHEDULE

The schedule for this WA is based on SulTRAC's work and sampling schedule. The major deliverables and a suggested schedule for submittals for the RI/FS at the M&H Site are presented in Table 2 below.

TABLE 2: PROPOSED MAJOR DELIVERABLES AND SCHEDULE		
DELIVERABLE	NUMBER OF COPIES	DUE DATE
Task 1.1 –Phase I RI/FS Work Plan	3*	30 days after kickoff meeting
Task 1.1 – Phase I Revised Work Plan	3	15 days after receipt of comments or negotiation meeting pertaining to Phase I Work Plan
Task 1.1 – Conflict of Interest Disclosure	3	Within five days from acceptance of WA December 14, 2006
Task 1.2 – Site Management Plan	2	30 days after Phase I work plan approval
Task 1.2 – Phase I Field Sampling Plan	2	30 days after Phase I work plan approval
Task 1.2 – Phase I Quality Assurance Project Plan	2	30 days after Phase I work plan approval
Task 1.2 – Data Management Plan	2	30 days after Phase I work plan approval
Task 1.2 – Health and Safety Plan	2	30 days after Phase I work plan approval
Task 1.3 – Monthly Progress Report	3	As provided in the contract
Task 5 – Phase I Data Validation Letter Report	2	21 days after receipt of Phase I analytical results from laboratory
Task 6 – Phase I Data Evaluation Summary Report	2	45 days after receipt of Phase I validated data
Task 1.1 – Phase II RI/FS Work Plan	3*	Phase I
Task 1.1 – Phase II Revised Work Plan	3	Phase II
Task 1.2 – Phase II Field Sampling Plan	2	Phase II
Task 1.2 – Phase II Quality Assurance Project Plan	2	Phase II
Task 5 – Phase II Data Validation Letter Report	2	Phase II
Task 6 – Phase II Data Evaluation Summary Report	2	Phase II
Task 7 – Draft HHRA Report	2	Phase II
Task 7 – Draft ERA Report	2	Phase II
Task 7 – Final HHRA Report	2	Phase II
Task 7 –Final ERA Report	2	Phase II
Task 9 – Draft RI Report	2	Phase II
Task 9 – Final RI Report	2	Phase II
Task 10– Remedial Alt Screening	2	Phase II
Task 11 –Remedial Alt Evaluation	2	Phase II
Task 12 – Draft FS Report	2	Phase II
Task 12 –Final FS Report	2	Phase II

TABLE 2: PROPOSED MAJOR DELIVERABLES AND SCHEDULE		
DELIVERABLE	NUMBER OF COPIES	DUE DATE
Task 15 – Work Assignment Completion Report (WACR)	3	45 days after receipt of the Work Assignment Closeout Notification (WACN)
Task 15 – Final Costs as documented in WACR	3	90 days after receipt of the WACN

Notes:* The work plan will be submitted electronically in Adobe portable document format (pdf) to the US EPA PO, CO, and WAM. All project deliverables will be submitted to the US EPA WAM in electronic formats. Hard copies will be provided as requested by US EPA.

4.0 QUALITY CONTROL

SulTRAC's internal quality control (QC) process requires that all project deliverables be reviewed to promote technical adequacy and completeness. SulTRAC's quality assurance (QA) manager or designee not associated with the WA will perform internal QC checks of WA activities. Internal QC checks will address adherence to this work plan and SulTRAC's QA program plan for RAC 2. The cost of QC reviews is included in the cost estimate for this WA.

5.0 COST ESTIMATE

The estimated LOE hours and dollars required for SulTRAC to complete the work under WA 016-RICO-B568, RI/FS, at Matthiessen & Hegeler Zinc, La Salle County, IL are 3,866 LOE hours and \$610,126, respectively. These totals are based on the revised US EPA SOW and WA, discussions from the kickoff meeting and WAF revision number two, dated January 15, 2008. To develop the cost estimate, SulTRAC used estimated labor rates under RAC 2. Appendix A summarizes the total project costs (Table A-1), proposed staffing plan (Table A-2), travel plan (Table A-3), other direct costs (Table A-4), field equipment costs (Table A-5), and subcontractor costs anticipated for this project (Table A-6). There are three sets of tables: (1) costs through December 2007 (including Award Fee), (2) a breakdown of the additional LOE hours and costs to May 2008, and (3) the revised total work assignment cost estimate.

APPENDIX A
PROPOSED COST ESTIMATE
(18 Pages)